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Letter to the Editor

Raynaud's phenomenon and inflammatory bowel disease: The possible role of microcirculation

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Vascular pathology is increasingly more recognized as an extra-intestinal manifestation of Inflammatory Bowel Disease (IBD) [1,2]. Raynaud's phenomenon (RP), a syndrome characterized by recurrent episodes of digital artery vasospasm, may be secondary to systemic diseases and is rarely associated with IBD [3,4]. RP occurs in the presence of abnormalities of dermal capillaries, the morphology of which can be examined by nailfold capillaroscopy (NFC), a standardized non-invasive technique [5].

The present study aimed to determine the impact of IBD on the microcirculation. After informed consent, consecutively followed IBD patients were prospectively screened for the presence of RP. NFC was performed with VideoCap® video-capillaroscope, with high magnification lens (x200). According to Cutolo *et al*, we considered significant abnormalities enlarged and giant capillary (loops larger than 20 µm and 50 µm, respectively), microhaemorrhages (defined as dark mass due to haemosiderin deposit), capillary loss (reduction of the number of capillaries to below the normal range), major dystrophies (ramified brunched capillary, neoangiogenesis) and minor dystrophies (tortuosities, corkscrew, meandering or bushy loops), over 33% of all capillary bed [6]. Chi Square Test was used for statistical analysis ($p < 0,05$).

We screened 5 patients with ulcerative colitis and 11 with Crohn's disease; overall 12 were female (75%) with a mean age of 50 ± 13 years. IBD patients with RP (IBDRP+, $n = 5$) presented a larger proportion of minor dystrophies and giant capillaries when compared to those without RP (IBDRP-, $n = 11$). In the IBDRP+ group, 20% (n = 1) of patients fulfilled criteria for an early scleroderma pattern and 40% ($n = 2$) revealed a non-scleroderma pattern. Unspecific NFC changes were present in 45% ($n = 5$) patients belonging to the IBDRP- group. The most relevant difference between both groups was the presence of persistent inflammatory activity (determined by colonoscopy in the previous 6 months) accompanied by erythrocyte sedimentation rate (ESR) elevation in 40% ($n = 2$) of IBDRP+ patients in contrast to 100% remission in the IBDRP- group. No significant correlation could be established between capillaroscopic findings between IBDRP+ and IBDRP- groups ($p = 0,197$). The groups did not differ as regards immunosuppressive treatment, beta-blocking agents, smoking or contraceptive use. Extra-intestinal known manifestations included uveitis ($n = 1$), psoriasis ($n = 4$) and spondyloarthritis ($n = 4$).

In our exploratory study, we found nailfold capillaroscopic changes in 25% (n = 4) IBD patients. In addition, 38% ($n = 6$) of patients presented unspecific changes, justifying follow up NFC evaluation.

The association between IBD activity, RP and microcirculatory changes has not yet been described and merits further study, as a common immunological mechanism may be responsible for both vascular and enterocytic damage.

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